Rave-Perkins, Krista

From: (b) (6)
Sent: Tuesday, July 26, 2016 4:04 PM
To: Rave-Perkins, Krista; Kowalski, Ed
Cc: 'Red Brick Road'; (b) (6)
Subject: Muckleshoot Tribe response re Gunshy Manor KC GRDE14-0143 GUNSHY GRADING PERMIT NOA, SITE PLAN, & SEPA ECL MAILS 6/30/16
Attachments: GRDE14-0143 reduced site plan on back of NOA.pdf; GRDE14-0143 SEPA ECL & gas emission work sheet.pdf; Gunshy parcel 0825069012.pdf; Evans Creek Salmon Fishery incl fish pics.docx; DPER declar all.pdf

Hello Ms. Rave-Perkins and Mr. Kowalski,

Our subset of Red Brick Road concerned citizens looks forward to meeting with you and Mr. Kowalski tomorrow afternoon.

I wanted to share with you the Muckleshoot Tribal Nation public comments regarding the "respondents" permit request of King County DPER as it is directly related to the settlement proposed in EPA Docket No's CWA-10-2016-0087 and CWA-10-2016-0088.

In addition to this information I have included the attached MS Word document of notes and images from our neighbors which the Muckleshoot fisheries team has identified as Sockeye and Chinook Salmon, an Endangered Species Act protected salmon, all of which are found in Evans Creek nearby the violation site. Also attached are copies of our neighbors own Declarations pursuant to 28 U.S.C Sec 1746 which state in their own 1st person narrative of the fish they've seen in Evans Creek in or nearby the "respondents" violation site going back to as far as 1945.

We, the citizens living nearby the violation site, have noted that in their public comments, the Muckleshoot Nation has brought new and material information to the county regulators attention, that being "respondents" had prior enforcement action in the Wetland C/D location but which was NOT found in the EPA "respondents" documents for which our community was privy to and which the Muckleshoot Nation has explained resulted in a significant flood plain interference. The Muckleshoot Nation is noting they have Treaty protected tribal fishing rights. Our community comments are simply calling for 100% restoral of the violation site that accounts for mitigation of all Citizen and Tribal noted errors and omissions given the significant and material nature of the alleged damages.

Cordially,
(b) (6)

(b) (6)
Redmond, WA

From: Red Brick Road [mailto:redbrickrd@outlook.com]
Sent: Tuesday, July 26, 2016 11:01 AM
To: Red Brick Road
Subject: FW: GRDE14-0143 GUNSHY GRADING PERMIT NOA, SITE PLAN, & SEPA ECL MAILS 6/30/16

Dear neighbors,

The following email contains public comments provided by the Muckleshoot tribe to King County DPER.

That a broad spectrum of groups are providing critical feedback to our regulatory bodies provides further evidence that our concerns around the Gunshy Manor restoration work are well-founded.

From: Karen Walter [mailto:KWalter@muckleshoot.nsn.us]
Sent: Monday, July 25, 2016 4:27 PM
To: Pederson, Jon <Jon.Pederson@kingcounty.gov>; Claussen, Kimberly <Kimberly.Claussen@kingcounty.gov>
Cc: Peace, Angie D (DFW) <Angela.Peace@dfw.wa.gov>; Rave-Perkins, Krista <Rave-Perkins.Krista@epa.gov>; paul.s.anderson@ecy.wa.gov; ralph.svrjcek@ecy.wa.gov
Subject: FW: GRDE14-0143 GUNSHY GRADING PERMIT NOA, SITE PLAN, & SEPA ECL MAILS 6/30/16

Jon and Kim,

We have reviewed the Notice of Application (NOA) for the Gunshy Grading permit referenced above affecting various parcels near 196th Ave NE /Red Brick Road and the Evans Creek Preserve. From a review of this information, parcel information, and the information in the Environmental Protection Agency's Administrative Order on Consent (Docket Number CWA-10-2016-0087), we offer the following questions and initial comments in the interest of protecting and restoring the Tribe's treaty-protected fisheries resources:

1.Stream, wetland and ditch impact concerns
From the materials that we have reviewed, we are concerned that more work within critical areas and/or their buffers may have occurred and not been accurately assessed. For example, per the Permit Applications Report data for parcel #0825069012, the mobile home currently placed on the property is noted to have been done so without permits back in 1990 (See E90C1074). King County's IMAP data layers shows a portion of the 100 year floodplain on this portion of this mobile home and its access road which suggests previously unauthorized work may have filled the 100 year floodplain of Evans Creek without mitigation. There may also have been impacts to Wetlands C and D, two wetlands adjacent to the NE 196th from this work. It appears from a review of aerial photography available from King County's IMAP between 2009 and 2013, that new road segments were added (the most southern E/W road and the N/S road on parcel #0825069012 along or over streams and ditches that do or could support salmon.

Given the previous compliance history from 1990, this project needs to demonstrate that the roads shown adjacent to streams and ditches, wetlands and their buffers were permitting by King County and were done such in compliance with the County's Critical Areas Ordinance. This would also include any stream or ditch crossings completed for these roads. For any roads or road sections that are unpermitted and are within regulated critical areas per the County's CAO, they should be removed and these areas fully restored. There is no discussion in the NOA about previously permitted and unpermitted areas to demonstrate how this project complies with King County regulations for the affected parcels.

There is also no meaningful analysis in the NOA materials regarding the extent of potential impacts to streams, wetlands, and ditches. Further, there is no assessment of the potential use of salmon in the onsite ditches which are noted to connect directly to Evans Creek. Several salmon species are found in Evans Creek per a variety of sources, including, but not limited to King County's WRIA 8 Fish Distribution Maps (see http://govlink.org/watersheds/8/reports/fish-maps/default.aspx).

Given the location of the ditches in a low gradient setting; their proximity to Evans Creek; data that we have collected from other ditches elsewhere in King County; the Stream assessment information from King County's Novelty Hill Road Project; and King County's Agricultural Waterways assessment for the Sammamish Agricultural Production District, we would expect the onsite ditches to be used by salmonids at least seasonally for refugia habitat. The aerial photography from 2009 shows these ditches in a more natural configuration and connected to wetland areas through surface flow which is the kind of habitat used by coho and steelhead salmon, particularly during flood events. Any waterbody on the affected streams that meet the physical criteria under WAC 222-16-031 should be treated as presumed fish habitat. The affected areas need to be assessed to determine which areas meet these criteria.

There is also no meaningful discussion about filling of the 100-year floodplain, the extent of these areas, and how the project will mitigate for these impacts.

2. Mitigation Concerns
In addition to the mitigation proposal lacking any mitigation for filling in the 100-year floodplain, the mitigation as proposed is inadequate for impacts to salmon and their habitats. As generally described in the checklist, the mitigation proposed is to reduce some of the unpermitted roadway widths and offer minimal planted areas with mostly grasses. This approach is inadequate and will perpetuate impacts to salmon and their habitats. As noted in the mitigation plan sent with the NOA, the most of the work (hatched areas) was done within existing regulated critical area buffers of Stream S1, Wetlands A, B,C, D, E, G, and Ditches 1,2, and 3. Yet, the mitigation proposal is to meander only a small portion of Ditch 1 instead of

its more natural configuration and restoring the portions of previously vegetated buffer as shown in the 2009 aerial photograph. The project also proposed to retain the Wetland B ditch segment that is likely draining a portion of Wetland B as a straightened feature without mitigation. The only re-vegetation proposed is a 15-wide area along segments of the two farm ditches and a 415 lineal foot onsite portion of Evans Creek. This is insufficient and does not provide adequate mitigation, particularly considering the extent of work done to date based on aerial photography and the resulting conditions of the critical areas.

The mitigation proposed for these parcels should be based on all of the previous unpermitted impacts as discussed in item 1 above and in full compliance with King County's Critical Areas Ordinance for streams and wetlands. If the ditches meet the criteria for presumed fish habitat, then they should be treated as Type F waters for purposes of mitigation and buffer re-establishment. All Type F waters on site should be restored with their fully regulated stream buffers (shown to be 165 feet). To do otherwise will perpetuate the existing degrading habitat conditions caused by unpermitted work and potentially grandfather these conditions as these parcels redevelop. The revised mitigation plan should also be compliant with the implementation measures from the Bear-Evans Creek Total Maximum Daily Load to ensure that the project is compliant with the Clean Water Act. See https://fortress.wa.gov/ecy/publications/documents/1110024.pdf

We appreciate the opportunity to comment on this proposal and look forward to your written response. Please let me know if you have any questions.

Thank you,
Karen Walter
Watersheds and Land Use Team Leader

Muckleshoot Indian Tribe Fisheries Division
Habitat Program
39015 172nd Ave SE
Auburn, WA 98092
253-876-3116

From: Goll, Shirley [mailto:Shirley.Goll@kingcounty.gov]
Sent: Thursday, June 30, 2016 9:40 AM
To: ECY RE SEPA REGISTER (separegister@ecy.wa.gov); Kriedt, Gary; Laura Murphy; Karen Walter; Gretchen.Kaehler@dahp.wa.gov; dlewarch@suquamish.nsn.us; TeamMillCreek@dfw.wa.gov; mattb@snoqualmietribe.us; cindy@snoqualmietribe.us; steve@snoqualmietribe.us; dwilliams@tulaliptribes-nsn.gov; david.winfrey@puyalluptribe.com; Russ.ladley@puyalluptribe.com; Brandon.Reynon@puyalluptribe.com
Cc: Pederson, Jon; Claussen, Kimberly; DPER, Public Notices; Carlson, Joanne
Subject: GRDE14-0143 GUNSHY GRADING PERMIT NOA, SITE PLAN, & SEPA ECL MAILS 6/30/16

If you have any comments or questions regarding the SEPA review for above permit please contact Kim Claussen at 206-477-0329 or e-mail: Kimberly.claussen@kingcounty.gov
Questions or comments regarding the Grading Permit should be directed to Jon Pederson at 206-477-0330 or e-mail: Jon.pederson@kingcounty.gov

Thank you,
Shirley Goll ASII
DPER/Permitting
206-488-0350
Shirley.goll@kingcounty.gov

D. 1/11

DECLARATION OF (b) (6)

I, (b) (6) pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6) I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I currently reside at (b) (6) Clyde Hill, Washington with my husband.
3. I moved to the Red Brick Road, 196th Avenue, N. E., in the autumn of 1945. I lived at (b) (6) 196th Avenue N. E. with (b) (6) until I got married and moved to Seattle with my husband in 1964.
4. As a young child growing up I have many memories of playing in our pasture and along the streams that run adjacent and through our property. There were always fish and I remember fishing (b) (6) (b) (6)
5. At some point, in the mid to late 1950's a fishway/hatchery, was installed by the Washington Department of Fisheries near 8004 Avondale Way N. E., from that time until the late 1980's there was a significant decline of salmon in the streams.
6. I also remember a conversation I had (b) (6) in the early 1990's (b) (6) b) (6) (b) (6) (b) (6) .) when he told me that the fish were slowly coming back.
7. I remember walking on our lane with (b) (6) b) (6) t was November 18, 1997, (b) (6) (b) (6) While walking, we heard a loud splashing noise and went to the creek to investigate. The creek in that area is shallow and we saw a huge salmon with its back exposed swimming up the stream.
8. In January 2003 (b) (6) I contacted Washington Department of Fish and Wildlife to get a trapper to help us manage the beaver population. They provided the name of a trapper and the trapper came out and set 2 traps but he was never able to trap any beavers as the traps were continually triggered by humans. The beavers are still very active on my property. It was just about 2 weeks ago that we wrapped an old willow trunk with chicken wire to protect it from the beavers who have been trying to harvest my tree for their dam.
9. Around 2006-2007 there was a time when a big salmon escaped from the stream and flipped himself to the middle of our pasture before it died. It was quite a distinct odor until we buried the carcass.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 23rd, 2016 (b) (6) _____

D. 2/11

DECLARATION OF (b) (6)

I, Christianne Sedoo, pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6) I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I am a resident of Redmond, Washington and have lived at (b) (6) 196th Avenue N. E., Redmond, WA. since 1988.
3. At the time of my move to (b) (6) 196th Avenue N. E. in 1988, Evans Creek, which flows through the middle of (b) (6) was 8-10 feet wide from bank to bank and the depth was between 3-6 feet deep depending on the location and the season. The portion of Evans Creek that ran through my property had a rocky bottom and the water was fast-moving and clean. There were fresh water clams, crawdads, frogs, all kinds of fish and very definitely salmon.
4. In late August and throughout September the salmon would travel up Evans Creek to spawn. The salmon would be tired and after spawning many would die. I always had to be very conscientious and keep my dogs in the front yard, fenced away from the creek so they would not go into the backyard because if they got into the backyard they would roll on the dead salmon.
5. The salmon spawning was thrilling to watch. Between the years of 1988 and 2001much of our entertainment was centered around the creek and its flora and fauna. We held many family/neighborhood parties so that other families could come watch the spectacle.
6. In the early 2000, probably 2001, the creek began to leave its banks seasonally. As the waters invaded the pasture, I tried to manage the swamp grass for a period of time because it was very unsafe for my horses. But it became unmanageable over time. In 2005 the creek never returned to its banks. Originally we had to have a bridge to cross the creek to get to a pasture (approximately 1 acre) that as of 2005, has now become unusable.
7. I remember a specific time in the early 2000's when water was leaving the banks and heading west. Baby fish were swimming beyond the banks of the creek and they were getting stuck in puddles in the surrounding pasture. (b) (6) I scooped fish from the surrounding pasture with 5 gallon buckets and poured them back into the creek to save them.

8. I also have memories over the years of locals fishing from the bridge that crosses Evans Creek on 196th Avenue N. E.
9. There was a long period of time that the Blue Heron had rookeries on 196th Avenue N. E., north of (b) (6) residence (b) (6) 196th Avenue N. E.). I remember seeing them nesting in the big trees that were living at the time on the east side of 196th Avenue N. E. People would come to watch them and there would be 8-10 nests per tree. The Blue Heron were there until the trees died due to water logging and there wasn't any more foliage.
10. I remember a time in the late 90's when I was riding my horse down the Red Brick Road (196th Avenue N. E.) and I could hear the sound of water running. I looked around on the east side of the road north of the (b) (6) residence, and I saw a beaver dam. Since then there has been a continual increase in the population of beavers in the area.
11. This valley, referred to as Happy Valley has lost many of its trees due to the changes in Evans Creek and the valley becoming waterlogged.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 21st, 2016 (b) (6) _____

D. 4/11

DECLARATION OF (b) (6)

I, (b) (6), pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6) I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I am a resident of Redmond, Washington and have lived and farmed a (b) (6) 196th Avenue N. E. since 1956.
3. I have seen the annual migration of the salmon for sixty years since my residency on 196th Avenue N. E., specifically going from west to east up Evans creek. Additionally, I have seen them pass under the 196th Avenue N. E. bridge that spans Evans creek. This migration has significantly declined over the years.
4. I have vivid memories of watching the red salmon moving south easterly and upstream from the kitchen window of (b) (6) home. They lived at (b) (6) 196th Avenue N. E., Redmond, WA on the west side of the creek and we could watch the migration from their kitchen window. Our children would try to catch the salmon with buckets and rakes but were never successful. The (b) (6) moved from the area in 1970. Due to the red color of the salmon and their weakened state having travelled such a distance from the salt water they were not in good condition so we didn't ever fish and collect any for meals as we believed they wouldn't be good to eat for dinner.
5. Another location that we watched the salmon from was from the bridge on the Redmond-Fall City highway. Approximately 25 feet west of 196th Avenue N. E. where the creek bends east.
6. In the springtime there were many, many King Fishers on the powerlines. They were perched waiting to feed on the fry.
7. Additionally, the Blue Heron had a rookery on the east side of 196th Avenue N. E. in the approximate 7500 block until 2008. It is now gone but many herons are still seen in the valley wetlands area and along Evans Creek.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 18th, 2016 (b) (6)

D.5/11

DECLARATION OF (b) (6)

I, (b) (6) pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6) I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I declare that (b) (6) (b) (6) I have read her Declaration of this date and believe the truth of its contents.
3. I have lived at (b) (6) 196th Avenue N. E., Redmond, WA 98053 continuously for more than thirty years.
4. During my residence at (b) 196th Avenue N. E., I have had continuous and uninterrupted use of 196th Avenue NE driving my car on the road and walking the road almost daily with my dogs until just 4 or 5 years ago when health concerns interrupted the regularity of my use. (b) (6) (b) (6) declaration it refreshed my memory to the point that I recalled that I too stood on the Brick Road bridge that went across Evans CreekA near our home and I too observed the salmon as they swam in abundance under the bridge. The many times I walked the Brick Road and looked down on what I then thought to be a drainage ditch I was surprised to see what I believed to be spawning salmon swimming in the creek in a direction from west to east.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 16th, 2016

(b) (6)

D. 6/11

DECLARATION OF (b) (6)

I, (b) (6), pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6). I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I am a resident of Redmond, Washington. I moved to the Red Brick Road in 1984 (b) (6) (b) (6) and since that time have resided at (b) (6) 196th Avenue N. E., Redmond, WA 98053.
3. One of the activities that I enjoyed throughout many of my thirty-two years living at (b) (6) 196th Avenue N. E. was walking the Red Brick Road northbound. On my walks I would often stop on the bridge which crosses Evans Creek to first watch the salmon swimming up the creek and then I would cross the bridge to see them swim out from under the bridge and continue up the creek to the east and emerge in the waters of the creek on the other side of the bridge and continue easterly.

   In the days of those observations the creek was flowing with ease, but as the years have passed the flow has slowed noticeably and there were fewer and fewer salmon until now when it has become a rare site.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 16th, 2016

(b) (6)

D.7/11

DECLARATION OF IOLA L. STETSON

I, (b) (6) pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6) I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I am a resident of Redmond, Washington and have lived at (b) (6) Redmond, WA. since 2000.
3. I purchased my property from (b) (6) (b) (6) (b) (6) who was almost 100 years old. The 19.8 acres was used as a farm and cows grazed both sides of Evans creek. (b) took me out to the creek and showed me where he had planted trees along the creek that had died as the water table came up in recent years.
4. (b) (6) shared that in the 60's the salmon running up the creek were so loud you couldn't sleep. That sparked my interest and I wandered the creek from 2000 to 2003 looking for salmon. I saw salmon in those years going up Evans Creek to spawn.
5. My dogs provided me with further evidence that the salmon were running as they brought me carcasses that had been partially eaten. They also chose to roll on them so I fenced the dogs away from the creek in 2003. I still saw an occasional carcass dropped by a hawk or eagle, but that hasn't been the case for many years.
6. With the addition of the beavers and their dams the creek has left its banks and most likely effected the salmon run.
7. One of the other joys of my property have been the birds. I am an avid photographer and the Blue Heron rookery north of my property provided me wonderful images. I still have Herons visit my property for photo ops. I've also enjoyed watching the Eagles, Red Tailed Hawks, and Owls that hunt on my property.
8. It has been a gift to live so close to Redmond and yet live in "the country". I mow my pastures and the hawks come looking for mice to catch. Every fall the deer jump the fence to eat the apples that have fallen from the trees.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 23rd, 2016 (b) (6)

D. 8/11

DECLARATION OF (b) (6)

I, (b) (6), pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6). I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I am a resident of Redmond, Washington and have lived at 196th Avenue N. E. since 1984.
3. In the late 1960's I purchased 40 acres of land on the west side of 196th Avenue N. E. and in the early 1970's I purchased another short 80 acres on the east side of 196th Avenue N. E. It was on the 80 acres on the west side of 196th Avenue N. E. that in 1984, I built the first home where I lived with (b) (6) (b) (6)
4. Our home address was (b) (6) 196th Avenue N. E. in 1984 and we lived there until 2004. In 2004, we built and moved to (b) (6) which is adjacent to our original home.
5. Upon purchasing the short 80 acres we fenced the entire property and ran our cattle on the entire 80 acres of land. At that time and for many years, all of the land was dry and we used it as pasture for our cattle.
6. It was in 1986 that I transferred ownership of 38.17 acres to King County (now called Evans Creek Natural Area) because King County would no longer allow us to pasture our cattle on the land due to its proximity to Evan's Creek and the wetland area. This relieved us of a property tax burden for land we were unable to utilize.
7. During the time that I have lived on 196th Avenue N. E. I have seen the annual migration of the salmon, specifically going from west to east up Evans creek under the 196th Avenue N. E. bridge that spans Evans creek. Many kids on bicycles and adults would stand at the bridges on 196th Avenue N. E. and catch fish. I used to drive and walk up and down 196th Avenue N. E. and I often stopped to watch the fish spawn. This migration has declined significantly over the years.
8. I remember two men who used to come every 3-4 weeks, park their car in what is now the driveway of 6415 196th Avenue N. E. and fish. They would cross the road and travel down the creek for quite a distance. After a few hours they would each emerge with a string of fish.

9. I also remember a time when Evans Creek was in the news because approximately a quarter of a million salmon had gotten outside of the creek bed and the water was too warm which caused them to die. It happened on the portion of Evans creek that is closer to highway 202.
10. Additionally, the Blue Heron had a rookery on the east side of 196th Avenue N. E. in the approximate area that is now referred to as Evans Creek Natural Area. It is now gone but many herons are still seen in the valley wetlands area and along Evans Creek.
11. At the time when the Blue Heron were nesting I remember seeing Bald Eagle nests up in the trees as well. They could be seen from 196th Avenue N. E. and if you looked with binoculars you could see the baby eagles in the nests waiting to be fed.
12. At one time, approximately 10-12 years ago, representatives from King County were on our property. They had driven down the private drive (N.E. 61st Place) and then headed north into the wetland area. When I approached them to ask them what they were doing they stated that they were planting Blue Heron.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 22nd, 2016 (b) (6)

D. 19/11

DECLARATION OF (b) (6)

I, (b) (6) pursuant to 28 U.S.C. § 1746, declare as follows:

1. My name is (b) (6) I am over the age of eighteen (18) years, and I am fully competent to make this declaration. I make this declaration based on my own personal knowledge and on knowledge that I have gained through my personal observation. The facts stated herein are all true and correct.
2. I am a resident of Redmond, Washington and have lived at 196th Avenue N. E. since 1984.
3. In the late 1960's (b) (6) purchased 40 acres on the west side of 196th Avenue N. E. and in the early 1970's he purchased another short 80 acres on the east side of 196th Avenue N. E. It was on the 80 acres on the west side of 196th Avenue N. E. that we built our first home in 1984. Our home address was (b) (6) in 1984 and we lived there until 2004 (b) (6) (b) (6) (b) (6) moved to (b) (6) which is adjacent to our original home.
4. Upon purchasing the short 80 acres we fenced the entire property and ran our cattle on the entire 80 acres of land. At the time and for many years, all of the land was dry and we used it as pasture for our cattle.
5. It was in 1986 that (b) (6) transferred ownership of 38.17 acres to King County (now called Evans Creek Natural Area) because the pasture land was waterlogged and had become unusable.
6. During the time that I have lived on 196th Avenue N. E. I have seen the annual migration of the salmon, specifically going from west to east up Evans creek under the 196th Avenue N. E. bridge that spans Evans creek. Many kids on bicycles and adults would stand at the bridges on 196th Avenue N. E. and catch fish. I used to ride my bike up and down 196th Avenue N. E. and I often stopped to watch the fish spawn. This migration has significantly declined over the years.
7. I remember two men who used to come and park their car in what is now the driveway of 6415 196th Avenue N. E. and fish. They would cross the road and travel down the creek for quite a distance. After about 3-4 hours they would each emerge with a string of fish. I remember seeing them about every 3-4 weeks.
8. Watching the salmon spawn was enjoyable for all of the locals. I specifically remember when my relatives came from Kansas City, Kansas in 2002 – my uncle delighted in walking the Red Brick Road and watching the salmon spawning.

D. 11/11

9. Additionally, the Blue Heron had a rookery on the east side of 196th Avenue N. E. until sometime around 2008. It is now gone but many herons are still seen in the valley wetlands area and along Evans Creek.
10. At the time when the Blue Heron were nesting I remember seeing Bald Eagle nests up in the trees as well. They could be seen from 196th Avenue N. E. and if you looked with binoculars you could see the baby eagles in the nests waiting to be fed.
11. At one time, approximately 10-12 years ago, (b) (6) (6) approached some representatives from King County because they were trespassing on our property. They had driven down the private drive (N.E. 61st Place) and then headed north into the wetland area. When he asked them what they were doing they stated that they were planting Blue Heron.

I declare under penalty of perjury that the foregoing is true and correct.

(b) (6)

Executed on July 22nd, 2016

Evans Creek Fishery

Recent pictures of Salmon in Evans Creek. These images were taken between Union Hill Road and SR 202 along the area bordering 196th Ave NE aka the Red Brick Road.

Related to:

1. EPA Docket No's : CWA-10-2016-0087, CWA-10-2016-0088
2. King County File No: GRDE14-0143

To Whom It May Concern:

The "respondent" or "applicant" listed in the above public records has made allegations in said public record(s), they have personally not seen fish in Evans Creek adjoining their land since 1957, thus creating uncertainty and doubt that fish are present in Evans Creek in or nearby the violation site. (See "applicants" statements quoted in KC DPER GRDE14-0143 SEPA ECL Sec 5)

Accordingly, community members have provided Declarations pursuant to 28 U.S.C Section 1746, that since 1945 and to this day sightings of fish, especially salmon, and other wildlife have been witnessed in Evans Creek, as close as adjoining land upstream and nearby land downstream of the violation site. Below are images provided by local citizens as examples of the salmon present, especially before damages were alleged to have occurred at the violation site "Gunshy Manor" in the last 7 years.

In addition, the community is also aware of indigenous people's historic presence in the form of hunting, fishing, gathering encampments in this watershed dating back 10,000 years. The most recent evidence exists approximately 1.5 miles from the violation site. *(Kopperl, R., Taylor, A., Miss, C., Ames, K., & Hodges, C. (2015). The Bear Creek Site (45KI839), a Late Pleistocene-Holocene Transition Occupation in the Puget Sound Lowland, King County, Washington PaleoAmerica, 1)*

Attachments below:

Pics 1, 5 and 6 with the red fish are sockeye….

Pic 2 cannot see well enough to determine salmon species

Pics 3 and 4 appear to be a chinook covered under the US Endangered Species Act

The community has compared the photos against information posted on King County's website…

http://www.kingcounty.gov/environment/animals-and-plants/salmon-and-trout/salmon-watchers/gallery.aspx

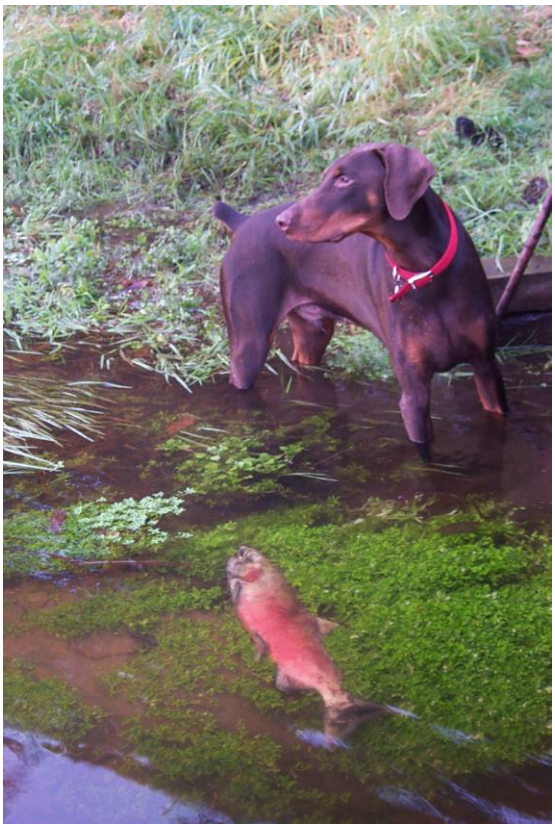
Picture 1, 2002. Within 1000 feet downstream of violation site referenced in enforcement actions from EPA and KC DPER.

Picture 2, 2000, taken within 1000 feet of violation site

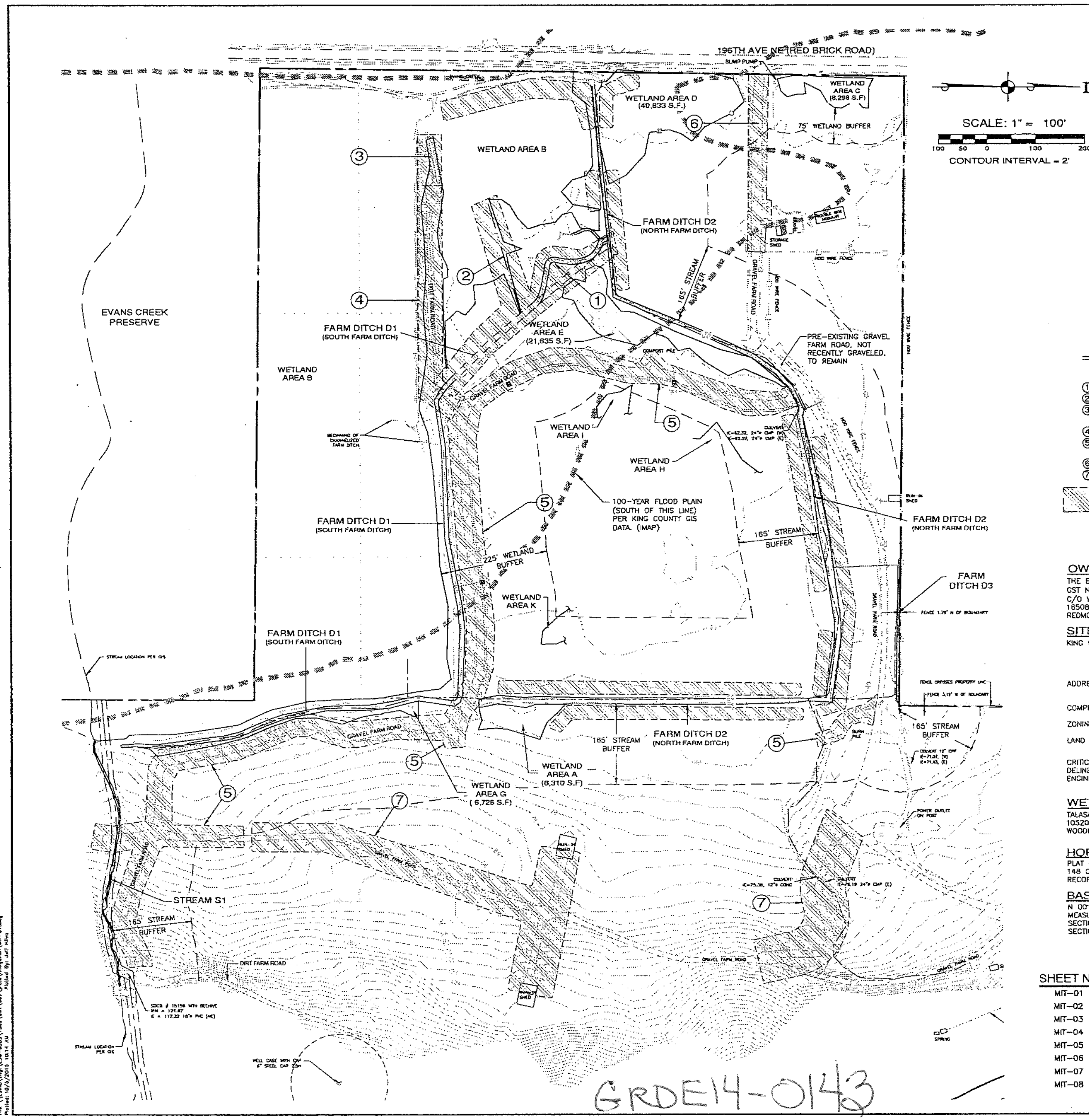
Picture 3, 2002, taken within 1000 feet of violation site, ESA Chinook sighting

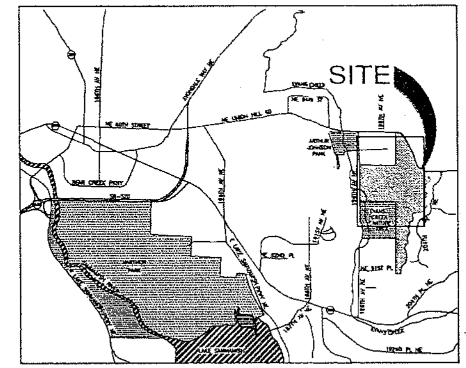
Picture 4, 2002, taken within 1000 feet of violation site, ESA Chinook sighting

Picture 5, 2000, taken within 2000 feet of violation site



Picture 6, 2000, taken within 1000 feet of violation site





VICINITY MAP

NOT TO SCALE

WORK DONE WITHOUT ALLEGEDLY REQUIRED COUNTY CRITICAL AREAS PERMITS
(KING COUNTY DPER #ENFR14-0512)

1. STRAIGHTENING PORTION OF EXISTING FARM DITCH D1
2. STRAIGHTENING EXISTING LATERAL FARM DITCH WITHIN WETLAND B
3. PLACEMENT OF GRAVEL AND SOIL ON PRE-EXISTING COBBLE SURFACED FARM ROAD WITHIN CRITICAL AREA/BUFFER
4. PLACEMENT OF GRAVEL AND SOIL ON PRE-EXISTING DIRT FARM ROAD WITHIN CRITICAL AREA BUFFER
5. PLACEMENT OF GRAVEL ON PRE-EXISTING DIRT FARM ROAD (AND ABUTTING EDGES) WITHIN CRITICAL AREA BUFFER
6. CONSOLIDATION OF PRE-EXISTING GRAVEL DRIVEWAY INTO PRE-EXISTING GRAVEL FARM ROAD
7. PLACEMENT OF GRAVEL ON PRE-EXISTING DIRT FARM ROAD OUTSIDE OF CRITICAL AREA BUFFERS

THE HATCHED AREA INDICATES SCHEMATIC AND GENERALLY MUCH-OVERSTATED AREAS OF (1) WORK DONE WITHOUT ALLEGEDLY REQUIRED COUNTY CRITICAL AREAS PERMITS, OR (2) THE PROPERTY OWNERS' PROPOSED MITIGATION/RESTORATION WORK AND PLANNED VOLUNTARY PLANTING OF TREES AND/OR POSSIBLE PLANTING OF NON-TREE PLANTS, OR (3) SOME COMBINATION OF ELEMENTS OF (1) AND (2).

OWNERS
THE ESTATE OF BARBARA J. NELSON AND THE WCN
GST NONEXEMPT MARITAL TRUST #2
C/O WILLIAM C. NELSON, JR.
16508 NE 79TH STREET
REDMOND, WA 98072

SITE DATA
KING COUNTY ASSESSORS PARCEL NUMBERS: 082506-9102
-9103
-9104
-9105
-9012

ADDRESS: 7240 196TH AVE NE
REDMOND WA, 98053

COMPREHENSIVE PLAN DESIGNATION: RURAL

ZONING: RA-5

LAND USE: FARMING AND RESIDENTIAL

CRITICAL AREAS, PURSUANT TO KING COUNTY CODE CHAPTER 21A.24, ARE DEPICTED HEREIN AS DELINEATED BY TALASAEA ASSOCIATES, JUNE, 24 2015 AND SURVEYED BY ESM CONSULTING ENGINEERS, LLC

WETLAND CONSULTANT
TALASAEA CONSULTANTS
10520 BEAR CREEK RD. NE
WOODINVILLE, WA 98077

HORIZONTAL DATUM
PLAT OF "GUN-SHY RIDGE" AS RECORDED IN VOLUME 148 OF PLATS, PAGES 77 THROUGH 89, UNDER RECORDING NO. 8910181051.

BASIS OF BEARING
N 00°14'24" E PER THE PLAT OF "GUN-SHY RIDGE" AS MEASURED BETWEEN THE FOUND SOUTHWEST CORNER OF SECTION AND THE FOUND WEST QUARTER CORNER OF SECTION AS DEPICTED HEREON.

BASIS OF VERTICAL DATUM:
NAVD88

BENCH MARK COR 9157, 2" DIAMETER BRASS DISK STAMPED "CITY OF REDMOND 9157, 2009"
LOCATION: SET IN CENTER OF A 5 FOOT WIDE CONCRETE STRIP AT THE NORTH END OF "HISTORIC BRICK ROAD", +/- 27' SOUTH OF THE INTERSECTION OF NE UNION HILL RD. AND 196TH AVENUE NE
ELEVATION = 68.32'

TEMPORARY BENCHMARKS:
TBM#1000-REBAR AND CONTROL CAP, EL.64.62'
TBM#2002-PK NAIL AND WASHER, EL.68.32'

SHEET NO.	DESCRIPTION
MIT-01	MITIGATION/RESTORATION PLAN - COVER SHEET
MIT-02	MITIGATION/RESTORATION PLAN - DITCHES
MIT-03	MITIGATION/RESTORATION PLAN - SPUR FARM ROAD
MIT-04	MITIGATION/RESTORATION PLAN - LOOP FARM ROAD
MIT-05	MITIGATION/RESTORATION PLAN - FARM DITCH D2
MIT-06	MITIGATION/RESTORATION PLAN - GRAVEL FARM ROAD
MIT-07	MITIGATION/RESTORATION PLAN - GRAVEL FARM ROAD
MIT-08	MITIGATION/RESTORATION PLAN - FARM ROADS

GRDE14-0143

REVISIONS		
NO.	DESCRIPTION/DATE	BY
1	SUBMITTED TO DPER 2014-12-02	ESM
2	SUBMITTED TO DPER 2014-12-27	ESM
3	SUBMITTED TO DPER 2015-10-05	ESM

STATE OF WASHINGTON REGISTERED LANDSCAPE ARCHITECT
LEANNE D. KUHLMAN
CERTIFICATE No. 743

ESM CONSULTING ENGINEERS LLC
33400 8th Ave S, Suite 205
Federal Way, WA 98003
FEDERAL WAY (253) 838-6113
EVERETT (425) 297-9900
www.esmcivil.com
Civil Engineering | Land Surveying | Land Planning
Public Works | Project Management | Landscape Architecture

THE ESTATE OF BARBARA J. NELSON
GUNSHY MANOR FARM
MITIGATION / RESTORATION PLAN COVER SHEET

KING COUNTY WASHINGTON

JOB NO.:	1309-001-012
DWG. NAME:	MIT-01
DESIGNED BY:	EGL
DRAWN BY:	JJH
CHECKED BY:	
DATE:	10/05/2015
DATE OF PRINT:	

MIT-01

1 OF 8 SHEETS

King County
Department of Permitting and Environmental Review
35030 SE Douglas Street, Suite 210
Snoqualmie, WA 98065-9266
206-296-6600 TTY Relay: 711
www.kingcounty.gov

SEPA CHECKLIST

For alternate formats, call 206-296-6600

SEPA ENVIRONMENTAL CHECKLIST

Purpose of checklist:

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

***Instructions for applicants*:**

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use "not applicable" or "does not apply" only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Instructions for Lead Agencies:
Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

Use of checklist for nonproject proposals:

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D). Please completely answer all questions that apply and note that the words "project," "applicant," and "property or site" should be read as "proposal," "proponent," and "affected geographic area," respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

A. Background

1. Name of proposed project, if applicable:

2. Name of applicant:

The Estate of Barbara J. Nelson, deceased

3. Address and phone number of applicant and contact person:

Applicant:
The Estate of Barbara J. Nelson, deceased
Attn: Willam C. ("Buff") Nelson, Jr.
16508 NE 79th St
Redmond, WA 98052

Contact Person:
Eric G. LaBrie, President
ESM Consulting Engineers, LLC
33400 8th Ave S, Suite #205
Federal Way, WA 98003
(253) 838-6113

4. Date checklist prepared:

October 5, 2015

5. Agency requesting checklist:

King County Department of Permitting and Environmental Review (KCDPER)

6. Proposed timing or schedule (including phasing, if applicable):

On-site work is proposed to begin in the Spring of 2016 and be completed by the Fall of 2016.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No. (The proposed work is intended to resolve disputed allegations of County code violations under County Code Enforcement Case #ENFR14-0512.)

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Geotechnical Report prepared by Associated Earth Sciences, Inc. dated April 5, 2014

Critical Areas Report (final revised) prepared by Talasaea Consultants, Inc. dated June 24, 2015

Technical Information Report (TIR) prepared by ESM Consulting Engineers, LLC dated September 29, 2015

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

Yes. An application was submitted for a Critical Areas Designation on or about

December 2, 2014. That application has been assigned King County Permit No. CADS14-0327.

Also, a settlement is in the process of being negotiated between the Estate of Barbara J. Nelson and the U.S. Environmental Protection Agency (USEPA) and State of Washington Department of Ecology (WDOE). It covers a scope of work that contains some but not all of the elements of the scope of work contemplated by the subject proposal under KCDPER Permit No. GRDE14-0143 that is the subject of this SEPA checklist.

10. List any government approvals or permits that will be needed for your proposal, if known.

King County restoration (clearing and grading) permit

SEPA Exemption or SEPA Threshold Determination issued by King County DPER

Hydraulic Project Approval (HPA) issued by the State of Washington Department of Fish & Wildlife (WDFW)

USEPA agreement/approval concerning some of the elements of the proposal

WDOE agreement/approval concerning some of the elements of the proposal

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

The proposed project involves the following four elements:

(1) Both (a) removing ±278 cubic yards of surface material (including gravel, dirt, and some cobble) from a ±500-foot-long segment of an existing farm road and (b) hydroseeding the segment's resulting surface;

(2) Reducing the width of ±3,100 lineal feet of existing gravel farm road segments by (a) mulching into underlying soils down to a ±12-inch depth the edge strips of the road segments' existing gravel-surfaced areas that lie outside of a 10-foot-wide gravel road corridor that is proposed to remain in place and (b) then revegetating those edge strips by planting them with pasture seed mix;

(3) Realigning a ±186-lineal-foot straight segment of a farm ditch with a ±222-lineal-foot meandering replacement farm ditch segment that is proposed to be excavated; and

(4) Planting of trees of native species and possible planting of some non-tree plants of native species at points generally within a 15-foot-wide area along (a) each side of segments of two farm ditches (segments totaling ±3,525 lineal feet) and (b) the east side of a ±415-lineal-foot on-site segment of Evans Creek.

The grand total of (a) the total area of proposed excavation, filling, and grading (±0.31 acres) and (b) the total gravel-surfaced area within the above-noted farm road

segments' edge strips proposed to be mulched into underlying soils (±0.45 acres) is ±0.76 acres.

In addition, the 15-foot-wide areas along (i) each side of the subject segments of two farm ditches and (ii) the east side of the subject on-site segment of Evans Creek total ±1.36 acres.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The project site on which all of the subject work is proposed includes five of the six parcels of land that comprise the Gunshy Manor Farm. The subject site is located at 7240 196th Avenue NE, in unincorporated King County near Redmond. The project site includes King County Assessor's Parcels 082506-9102, -9103, -9104, -9105, and -9012. The legal description and zoning corresponding to each of those five parcels are set forth in the following table:

Project Site Parcel Data		
Assessor's Parcel Number	**Legal Description**	**King County Zoning Classification**
082506-9102	Lot 2 of King County Boundary Line Adjustment No. BLAD13-0002, recorded under Recording No. 20130610900002	RA-5
082506-9103	Lot 3 of King County Boundary Line Adjustment No. BLAD13-0001, recorded under Recording No. 20130610900001	RA-5-P
082506-9104	Lot 4 of King County Boundary Line Adjustment No. BLAD13-0003, recorded under Recording No. 20130610900003	RA-5-P
082506-9105	Lot 5 of King County Boundary Line Adjustment No. BLAD13-0003, recorded under Recording No. 20130610900003	RA-5-P
082506-9012	Lot 6 of King County Boundary Line Adjustment No. BLAD13-0003, recorded under Recording No. 20130610900003	RA-5

Heavy truck and equipment ingress and egress between the public roadway system and the project site for the proposed work will be by means of the existing private road within the sixth Gunshy Manor Farm parcel (APN 082506-9013), a parcel that has a driveway connection with NE Union Hill Road. The address of that sixth parcel is 20005 NE Union Hill Road. The sixth parcel's legal description is Lot 1 of King County Boundary Line Adjustment No. BLAD13-0001, recorded under Recording No. 20130610900001. That parcel is zoned RA-5-P.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site:

(circle one): (Flat,) rolling, hilly, (steep slopes,) mountainous, other _____

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 60%. The eastern portion of the site is characterized by steep slopes which then transition toward the west to more gradual slopes. The western portion of the site, where all of the proposed work is to be performed, is very flat.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

Per the USDA Web Soil Survey, the site soils by area are approximately; 27% Seattle Muck, 21% Norma Sandy Loam, 18% Alderwood & Kitsap Soils, and 18% Everett Gravelly Sandy Loam, while the remaining 15% consists of smaller areas of various other soil types.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No.

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

The primary purpose of the proposed project is to resolve alleged Critical Areas violations that are the subject of King County Code Enforcement Case Number ENFR14-0512. To that end, the first three of the four elements of the project summarized under section A.11, above, are proposed. Those three elements are more specifically described as follows:

(1) Both (a) removing ±278 cubic yards of surface material (including gravel, dirt, and some cobble) from a ±500-foot-long segment of an existing farm road (a farm road referred to by the applicant as the "Spur Farm Road" that lies within the southerly portion of APN 082506-9012) to approximately match the plotted profile of pre-material-placement elevations along the road centerline and (b) hydroseeding the segment's resulting disturbed surfaces. This work is proposed to be done as specified on Sheet 3 of 8 of the October 5, 2015 Mitigation/Restoration Plan set for the project prepared by ESM Consulting Engineers LLC (and any DPER-approved amendments thereto).

(2) Reducing the width of ±3,100 lineal feet of existing gravel farm road segments (nearly all of the total length thereof lying within APN 082506-9012 and the remaining length thereof lying within 082506-9102) by (a) mulching into underlying soils down to a ±12-inch depth the edge strips of the subject road segments' existing gravel-surfaced areas that lie outside of a 10-foot-wide gravel road corridor that is proposed to remain in place and (b) then revegetating those edge strips by planting them with pasture seed mix. This work is proposed to be done as specified on Sheets 4, 6, and 7 of 8 of the Mitigation/Restoration Plan set (and any DPER-approved

amendments thereto).

(3) Realigning a ±186-lineal-foot straight segment of a farm ditch (a farm ditch that the applicant refers to as "Farm Ditch 1") by (a) filling that straight segment with ±27 cubic yards of dirt (which will result in a ±2,079-square-foot plan view surface area that is then to be replanted with pasture seed mix) and (b) then replacing it with an approximately 222-lineal-foot meandering farm ditch segment. (The replacement segment, which will be comparable in cross-section to the straight segment's cross-section, will have a plan view surface area of ±2,481 square feet.) The meandering segment is proposed to be created by excavating ±37 cubic yards of dirt. (That dirt is to be used to fill the 186-lineal-foot straight segment that the meandering segment is to replace.) Both the straight segment and the meandering replacement segment lie within the southwestern quadrant of APN 082506-9012. This ditch realignment work is proposed to be done as specified in the large drawing box entitled "Enlarged Area of Mitigation" on the left side of Sheet 2 of 8 of the Mitigation/Restoration Plan set (and any DPER-approved amendments thereto).

The grand total of (a) the total area of proposed excavation, filling, and grading (±0.31 acres) and (b) the total gravel-surfaced area within the above-noted farm road segments' edge strips proposed to be mulched into underlying soils (±0.45 acres) is ±0.76 acres.

The 15-foot-wide areas along (i) each side of the subject segments of two farm ditches and (ii) the east side of the subject on-site segment of Evans Creek total ±1.36 acres.

Regarding volumes ±278 cubic yards of material (material proposed to be excavated from the Spur Farm Road) is proposed to be removed from the site and hauled by truck to an approved receiving facility such as Cadman Sand and Gravel. Upon completion of the project, it is anticipated that ±10 cubic yards of excavated material from the proposed meandered replacement ditch segment will remain on-site for future use. All excavated material left on the project site will be stockpiled outside of wetland and stream critical area buffers and covered with a tarp until used.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

It is highly unlikely that erosion could occur due to (a) the extremely flat grades of the portions of the site within which all of the construction work is proposed and (b) the very narrow strips of land within which each element of the proposed work is to occur.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Per the Septmeber 29, 2015 Technical Information Report prepared by ESM Consulting Engineers, the project will restore existing Gunshy Manor farm roads (farm roads comprising approximately 23,200 square feet of impervious surface) to their original condition. The remaining impervious-surface area of the site will be approximately 0.9% of the total ±106.82-acre project site.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

As specified on Sheet 3 of 8 of the October 5, 2015 Mitigation/Restoration Plan set for the project set and as noted in above section B.1.e of this competed SEPA Checklist, following removal of ±278 cubic yards of surface material from a ±500-foot-long segment of the "Spur Farm Road," the disturbed surfaces will be hydroseeded.

Also, as specified on Sheets 4, 6, and 7 of 8 of the Mitigation/Restoration Plan set and as noted in above section B.1.e of this competed SEPA Checklist, following the mulching into underlying soils of the ±3,100 lineal feet of existing gravel farm road segments' existing gravel surface that lie outside of the 10-foot-wide gravel road corridor that is proposed to remain in place, those edge strips will be revegetated by planting them with pasture seed mix.

In addition, as specified in the large drawing box entitled "Enlarged Area of Mitigation" on the left side of Sheet 2 of 8 of the Mitigation/Restoration Plan set, following the filling of a ±186-lineal-foot straight segment of Farm Ditch 1 that is to be filled as part of a realignment of that segment by replacement of it with a ±222-lineal-foot meandering segment, the surface of the filled area will then be replanted with pasture seed mix.

Further, temporary erosion and sedimentation control measures will be provided if and to the extent required by King County.

2. Air

a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Emissions from the project would result from exhaust from trucks and heavy equipment used in the excavation, fillling, grading, installation, removal, and disposal of various materials concerning the project.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None proposed.

3. Water

a. Surface Water:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes. Several wetlands are located on-site and off-site, including Category I, Category III, and Category IV wetlands. A portion of Evans Creek and a portion of Martins Creeks are located on the site, along with a smaller, unnamed stream and several farm ditches. Please refer to the Critical Areas Report prepared by Talasaea Associates for more detailed information.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes. Some of the project work is proposed in or adjacent to wetlands and farm ditches, and one of the ±15-foot-wide areas proposed for planting of trees and possible planting of non-tree plants will lie along the east edge of an on-site segment of Evans Creek. Some of the proposed work is necessary to remove cobble, gravel and other earthen materials that lie within wetland and/or stream critical area buffers. All work is part of an 8-sheet Mitigation/Restoration Plan set. Execution of the proposed work contemplated by that plan will improve the overall quality and success of certain of the wetlands, farm ditches, and Evans Creek and their respective critical areas buffers. Please see the Mitigation/Restoration Plan set for more information.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

As part of a realignment of a ±186-lineal-foot straight segment of Farm Ditch 1 by replacement of that segment with a new ±222-lineal-foot meandering segment that is proposed to be created by excavation, the straight segment will be filled with ±27 cubic yards of the 37 cubic yards of the material that is proposed to be excavated to create the new meandering segment. Both the straight segment and the meandering replacement segment lie within the southwestern quadrant of APN 082506-9012.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

Yes. A portion of the proposed work is known to be located within a 100-year floodplain. The approximate location of the 100-year floodplain [as based on King County GIS (iMAP) information] is depicted on Sheet 1 of 8 of the Mitigation/Restoration Plan set.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No.

b. Ground Water:

1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No such waste-material discharge is proposed as part of this project.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff is generated via the Gunshy Manor Farm property's impervious surfaces (e.g., driveways, farm roads, etc.). A system of farm ditches, yard drains, and culverts exist on the project site to collect and dispose of stormwater runoff generated on the Gunshy Manor Farm property. All runoff from the property ultimately flows into Evans Creek.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No.

3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.

No.

d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:

No such measures are needed because no surface, ground, and/or runoff water impacts or drainage pattern impacts are expected to result from any of the proposed work. Consistent with this and as explained in Section 2 on page 3 of the Technical Information Report prepared by ESM Consulting Engineers, the proposed project is not considered a land disturbing activity. For these reasons, no measures to reduce or control surface, ground, and runoff water and drainage pattern impacts are needed or proposed.

4. **Plants**

a. Check the types of vegetation found on the site:

☑ deciduous tree: **alder**, **maple**, **aspen**, **other (cottonwood)**
☑ evergreen tree: **fir**, **cedar**, pine, **other (hemlock)**
☑ shrubs
☑ grass
☑ pasture
☑ **crop (hay)** or grain
__ Orchards, vineyards or other permanent crops
☑ wet soil plants: cattail, buttercup, bullrush, skunk cabbage, **other (reed canary grass)**
____water plants: water lily, eelgrass, milfoil, other
____other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

The only vegetation proposed to be removed or altered as part of the proposed project is (i) ±9,800 square feet of the existing grassy vegetation that is currently growing on the Spur Farm Road and that will be removed as part of the Spur Farm Road excavation and replaced by vegetation that will arise from the proposed hydroseeding of the completed excavation of the Spur Farm Road and (ii) ±2,481 square feet of the

existing hayfield vegetation on the surface of the strip of land where a meandering segment of Farm Ditch 1 is proposed to be dug to replace an existing straight segment of Farm Ditch 1 (and, following filling of the straight ditch segment, the resulting ±2,079-square-foot filled surface area will be planted with pasture seed mix for hay production).

c. List threatened and endangered species known to be on or near the site.

None are known.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

The proposed work includes:

(1) Hydroseeding of the Spur Farm Road excavation area;

(2) Planting of the ±186-lineal-foot straight ditch segment to be filled as part of ditch remandering;

(3) (Following mulching of the existing gravel surface of the above-described ±3,100 lineal feet of existing gravel farm road segments into underlying soils) planting of those farm road edge strips with pasture seed mix; and

(4) Planting of trees of native species and possible planting of some non-tree plants of native species at points generally within a ±15-foot-wide area along each side of segments of two farm ditches (segments totaling ±3,525 lineal feet) and along the east side of a ±415-lineal-foot on-site segment of Evans Creek (with the approximate locations of currently planned trees in those areas depicted on Sheets 2, 4, 5, and 6 of 8 of the Mitigation/Restoration Plan set).

Please see the Mitigation/Restoration Plan sheets for more information.

e. List all noxious weeds and invasive species known to be on or near the site.

Reed canary grass

Evergreen Blackberry

5. **Animals**

a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site.

Examples include:

birds: hawk, heron, eagle, songbirds, other:
mammals: deer, bear, elk, beaver, other:
fish: bass, salmon, trout, herring, shellfish, other _____

The list of such birds and other animals is as follows:

Hawks

Robins and other small songbirds

Geese and ducks

Deer, black bear, coyotes, beaver, and moles

Page 18 of the Critical Areas Report states that "Evans Creek is known to support runs of anadromous fish, including Puget Sound Chinook (*Oncorhynchus tshawytscha*), coho (*O. kisutch*), sockeye (*O. nerka*), steelhead (*O. mykiss*), and coastal cutthroat trout (*O. clarki*)." A segment of Evans Creek flows along a portion of the west edge of the subject property. However, William C. ("Buff") Nelson, Jr. (who, starting at seven years of age from 1957 on, grew up on the Gunshy Manor Farm and who has ever since frequently spent extensive time on the subject family property) reports that he has never seen any types of fish in the segment of Evans Creek on the Gunshy Manor Farm property or in any of the farm ditches on the property.

b. List any threatened and endangered species known to be on or near the site.

None are known to be on or near the site.

c. Is the site part of a migration route? If so, explain.

Yes. This entire region is known to be part of the Pacific Flyway. The Pacific Flyway includes Alaska and the Aleutian Islands and the Rocky Mountain and Pacific Coast regions of Canada, the United States, and Mexico, south to where it becomes blended with the other flyways in Central and South America.

d. Proposed measures to preserve or enhance wildlife, if any:

No measures are proposed specifically to preserve or enhance wildlife; however, the proposed planting of trees of native species and possible planting of some non-tree plants of native species at points generally within a ±15-foot-wide area laong (a) each side of segments of the two farm ditches (segments totalling ±3,525 lineal feet) and (b) the east side of a ±415-lineal-foot on-site segment of Evans Crek would help to enhance wildlife habitat.

e. List any invasive animal species known to be on or near the site.

Moles.

6. **Energy and Natural Resources**

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Gasoline and/or diesel will be used to power heavy machinery involved with the work on the proposed project. No other energy sources are expected to be required.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

None proposed.

7. **Environmental Health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

No.

1) Describe any known or possible contamination at the site from present or past uses.

None is known.

2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

None are proposed.

3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.
None.

4) Describe special emergency services that might be required.

None.

5) Proposed measures to reduce or control environmental health hazards, if any:

None.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

None.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Short-term noise associated with the operation of heavy machinery and removal of materials would be created during the execution of the proposed work. No long-term noise impacts are anticipated from the proposed work.

3) Proposed measures to reduce or control noise impacts, if any:

None proposed.

8. **Land and Shoreline Use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

The project site (five of the six parcels of land that comprise Gunshy Manor Farm) is a working farm. (See response to subsection b, immediately below, for additional information.) The Gunshy Manor Farm property is generally surrounded by large-lot single-family residential development. The Evans Creek Natural Area abuts a portion of the southern part of the property's west side.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

For over 50 years, the subject property has been operated as Gunshy Manor Farm, one of Washington's most successful Thoroughbred and Polled Hereford breeding farms. Known especially for its Thoroughbred racehorses, Gunshy Manor Farm initially started breeding riding horses. In 1962, the farm bred its first racehorse, the stakes-placing Roman Mutiny. Over the years, Gunshy Manor Farm has regularly ranked among the state's top five breeders both in wins and earnings. In 2007, Gunshy Manor Farm ranked number one in the State of Washington. In August of 2014, Gunshy Manor Farm received the State of Washington Thoroughbred Industry's highest honor by being inducted into the Washington Thoroughbred Hall of Fame. In addition to Gunshy Manor Farm's distinguished Thoroughbred breeding history, the farm has in the past and today continues to produce annually, on average, 120 tons of high-quality Timothy, Tall Fescue, and Pasture Grass hay that it sells locally to farms in the Sammamish and Evans Creek valleys.

Normal farming activities at Gunshy Manor Farm have historically included (1) activities related to the breeding and raising of horses (such as feeding, exercising, riding, and training horses; foaling mares; maintaining fences; and maintaining riding trails), (2) activities related to maintaining haying operations and pastures (such as mowing, disking, harrowing, soil amendment, fertilizing, seeding, baling hay, repairing storm damage, removal of trees damaged by storms, and maintaining farm ditches and associated culverts for farm road crossings), and (3) ensuring access to the entire farm by maintaining its farm roads. The current owners intend to continue farming the property until the property is ultimately sold.

No agricultural or forest land will be converted to other uses as a result of the proposal.

1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:

No.

c. Describe any structures on the site.

There is a small house with a detached shed on the western side of the project site. There are three small run-in sheds dispersed across the site. On the northern end of the overall Gunshy Manor Farm property (on the parcel that is not part of the subject project site) there is a larger home with several associated outbuildings and a large barn.

d. Will any structures be demolished? If so, what?

No.

e. What is the current zoning classification of the site?

RA-5 (as to some of the parcels) and RA-5-P (as to other parcels)

f. What is the current comprehensive plan designation of the site?

RA

g. If applicable, what is the current shoreline master program designation of the site?

Not applicable.

h. Has any part of the site been classified as a critical area by the city or county? If so, specify.

Yes. Several wetlands, streams, and farm ditches that appear to fit within the County's classifications for certain critical areas are located on the project site. Please see the Critical Areas Report prepared by Talasaea Consultants, Inc. for more information.

i. Approximately how many people would reside or work in the completed project?

The proposed work will have no bearing on the number of people residing or working on the subject project site.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:

None proposed.

L. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Not applicable.

m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:

Not applicable.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None proposed.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None eliminated.

c. Proposed measures to reduce or control housing impacts, if any:

Not applicable.

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

No structures are proposed.

b. What views in the immediate vicinity would be altered or obstructed?

None.

c. Proposed measures to reduce or control aesthetic impacts, if any:

Not applicable because the project willnot cause aestetic impacts.

The proposed planting of trees of native species and possible planting of non-tree plants of native species at points generally within a ±15-foot-wide area along (a) each side of segments of two farm ditches (segments totaling ±3,525 lineal feet) and (b) the east side of a ±415-lineal-foot on-site segment of Evans Creek would create aesthetic benefits.

11. **Light and Glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

c. What existing off-site sources of light or glare may affect your proposal?

None are known.

d. Proposed measures to reduce or control light and glare impacts, if any:

None proposed.

12. **Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?

The Evans Creek Natural Area is located directly to the south of the westernmost parcel (APN 082506-9012) of the five parcels comprising the project site. Sportsman, Martin, and Perrigo Parks are also located nearby.

b. Would the proposed project displace any existing recreational uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

None proposed.

13. **Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.

The Red Brick Road, a designated King County Landmark, lies within a segment of the 196th Avenue NE right-of-way from a point just south of NE Union Hill Road south to NE 55th Place. A segment of that right-of-way within which the Red Brick Road is centered abuts the westernmost edge of the subject project site.

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

To our knowledge, (i) there are no landmarks, features, or other evidence of Indian or historic use or occupation of the project site and (ii) there is not any material evidence of and there are no artifacts or areas of cultural importance on or near the project site except for the Red Brick Road. According to Buff Nelson, one or more members of the Nelson family have lived on and/or operated the farm on the Gunshy Manor Farm property continually ever since 1957 to the present and, except for the Red Brick Road near the property, neither he nor any of the other members of the Nelson family have ever learned of any (i) landmarks, features, or other evidence of Indian or historic use or occupation of the Gunshy Manor property or (ii) material evidence of artifacts or areas of cultural importance on or near the Gunshy Manor Farm property.

The State of Washington Department of Archeology & Historical Preservation (DAHP) online database was accessed by ESM Consulting Engineers on September 17, 2015. A Historic Property Inventory Report (Field Site No. 0825069013) obtained that day using the DAHP website's search tool identifies a house on APN 082506-9013 (the northernmost parcel that is part of the overall Gunshy Manor Farm but is not part of the subject project site). The report indicates that, according to the County Assessor, "the structure was built in 1900 and is a single family dwelling" and "[t]he form of the building is single family." [Note that Buff Nelson has explained that that house has been remodeled.]

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

No potential impacts to cultural and historic resources would result from the proposed project. Except for the Red Brick Road, there are no cultural and historic resources in existence on or near the project site.

Further, the scope of the proposed work is minimal.

In addition, for the protection of the Red Brick Road, Buff Nelson has advised that the owners of the project site will limit to Gunshy Manor Farm's north driveway connection to Union Hill Road the project's construction access to and from the proposed project's work areas by vehicles in Federal Highway Administration (FHWA) Class 4 and higher.

In view of the above, further assessment of potential impacts is not warranted.

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

Limiting to Gunshy Manor Farm's north driveway connection to Union Hill Road the project's construction access to and from the proposed project's work areas by vehicles in FHWA Class 4 and higher.

In addition, if any cultural and historic resources are discovered on the project site during project construction, the project site owners will promptly contact DAHP and advise of the discovery.

14. **Transportation**

a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.

The project site is served by both (i) NE Union Hill Road (through the northernmost Gunshy Manor Farm parcel) and (ii) the Red Brick Road segment of 196th Avenue NE.

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

The nearest transit stop is located at the intersection of NE Union Hill Road and 178th Place NE, approximately 1.4 miles to the west of the project site.

c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?

No additional parking spaces are proposed, and no parking spaces will be eliminated as a result of the project.

d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).

No.

e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?

No additional vehicular trips per day are anticipated to be generated by the completed project.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

No.

h. Proposed measures to reduce or control transportation impacts, if any:

For the protection of the Red Brick Road, the Gunshy Manor Farm owners propose to limit the Gunshy Manor Farm's north driveway connection to Union Hill Road the project's construction access to and from the proposed project's work areas by vehicles in FHWA Class 4 and higher.

15. **Public Services**

a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.

No.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None proposed.

16. **Utilities**

a. Circle utilities currently available at the site:
electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other _____

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None proposed.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____

Name of signee Eric G. LaBrie

Position and Agency/Organization President, ESM Consulting Engineers LLC

Date Submitted: October 5, 2015

D. Supplemental sheet for nonproject actions

(**IT IS NOT NECESSARY** to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

   Proposed measures to avoid or reduce such increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

3. How would the proposal be likely to deplete energy or natural resources?

   Proposed measures to protect or conserve energy and natural resources are:

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   Proposed measures to protect such resources or to avoid or reduce impacts are:

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

   Proposed measures to avoid or reduce shoreline and land use impacts are:

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

   Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

King County Department of Development and Environmental Services
SEPA GHG Emissions Worksheet
Version 1.7 12/26/07 (Introduction Revised March 2011)

Introduction

The Washington State Environmental Policy Act (SEPA) requires environmental review of development proposals that may have a significant adverse impact on the environment. If a proposed development is subject to SEPA, the project proponent is required to complete the SEPA Checklist. The Checklist includes questions relating to the development's air emissions. The emissions that have traditionally been considered cover smoke, dust, and industrial and automobile emissions. With our understanding of the climate change impacts of greenhouse gas (GHG) emissions, King County requires the applicant to also estimate these emissions.

Emissions created by Development

GHG emissions associated with development come from multiple sources:

- The extraction, processing, transportation, construction and disposal of materials and landscape disturbance (Embodied Emissions)
- Energy demands created by the development after it is completed (Energy Emissions)
- Transportation demands created by the development after it is completed (Transportation Emissions)

GHG Emissions Worksheet

King County has developed a GHG Emissions Worksheet that can assist applicants in answering the SEPA Checklist question relating to GHG emissions.

The SEPA GHG Emissions worksheet estimates all GHG emissions that will be created over the life span of a project. This includes emissions associated with obtaining construction materials, fuel used during construction, energy consumed during a buildings operation, and transportation by building occupants.

The SEPA GHG Emissions worksheet should not be used to estimate GHG emissions from large, complex projects, such as urban planned developments, major infrastructure projects, or projects that require an Environmental Impact Statement (EIS). For more sophisticated tools that may help with assessing the GHGs of these actions, see the Washington State Department of Ecology's (Ecology) SEPA and climate change website: http://www.ecy.wa.gov/climatechange/sepa.htm

Using the Worksheet

1. Descriptions of the different residential and commercial building types can be found on the second tabbed worksheet ("Definition of Building Types"). If a development proposal consists of multiple projects, e.g. both single family and multi-family residential structures or a commercial development that consists of more than on type of commercial activity, the appropriate information should be estimated for each type of building or activity.
2. For paving, estimate the total amount of paving (in thousands of square feet) of the project.
3. The Worksheet will calculate the amount of GHG emissions associated with the project and display the amount in the "Total Emissions" column on the worksheet. The applicant should use this information when completing the SEPA checklist.

ARDE14-0143

4. The last three worksheets in the Excel file provide the background information that is used to calculate the total GHG emissions.
5. The methodology of creating the estimates is transparent; if there is reason to believe that a better estimate can be obtained by changing specific values, this can and should be done. Changes to the values should be documented with an explanation of why and the sources relied upon.
6. Print out the "Total Emissions" worksheet and attach it to the SEPA checklist. If the applicant has made changes to the calculations or the values, the documentation supporting those changes should also be attached to the SEPA checklist.

Disclaimer – March 2011

This worksheet has not been updated 2007. Since then, new resources have become available that more accurately estimate the greenhouse gas emissions impacts of projects. This worksheet can still be used to provide a coarse estimate of a typical project's climate change impact, but should be used with caution. See Ecology's SEPA and climate change website for additional resources:
http://www.ecy.wa.gov/climatechange/sepa.htm

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e)			Lifespan Emissions (MTCO2e)
			Embodied	Energy	Transportation	
Single-Family Home	0		98	672	792	0
Multi-Family Unit in Large Building	0		33	357	766	0
Multi-Family Unit in Small Building	0		54	681	766	0
Mobile Home	0		41	475	709	0
Education		0.0	39	646	361	0
Food Sales		0.0	39	1,541	282	0
Food Service		0.0	39	1,994	561	0
Health Care Inpatient		0.0	39	1,938	582	0
Health Care Outpatient		0.0	39	737	571	0
Lodging		0.0	39	777	117	0
Retail (Other Than Mall)		0.0	39	577	247	0
Office		0.0	39	723	588	0
Public Assembly		0.0	39	733	150	0
Public Order and Safety		0.0	39	899	374	0
Religious Worship		0.0	39	339	129	0
Service		0.0	39	599	266	0
Warehouse and Storage		0.0	39	352	181	0
Other		0.0	39	1,278	257	0
Vacant		0.0	39	162	47	0

Section II: Pavement

Pavement		0.00				0

Total Project Emissions: 0

Definition of Building Types

Type (Residential) or Principal Activity (Commercial)	Description
Single-Family Home	Unless otherwise specified, this includes both attached and detached buildings
Multi-Family Unit in Large Building	Apartments in buildings with more than 5 units
Multi-Family Unit in Small Building	Apartments in building with 2-4 units
Mobile Home	
Education	Buildings used for academic or technical classroom instruction, such as elementary, middle, or high schools, and classroom buildings on college or university campuses. Buildings on education campuses for which the main use is not classroom are included in the category relating to their use. For example, administration buildings are part of "Office," dormitories are "Lodging," and libraries are "Public Assembly."
Food Sales	Buildings used for retail or wholesale of food.
Food Service	Buildings used for preparation and sale of food and beverages for consumption.
Health Care Inpatient	Buildings used as diagnostic and treatment facilities for inpatient care.
Health Care Outpatient	Buildings used as diagnostic and treatment facilities for outpatient care. Doctor's or dentist's office are included here if they use any type of diagnostic medical equipment (if they do not, they are categorized as an office building).
Lodging	Buildings used to offer multiple accommodations for short-term or long-term residents, including skilled nursing and other residential care buildings.
Retail (Other Than Mall)	Buildings used for the sale and display of goods other than food.
Office	Buildings used for general office space, professional office, or administrative offices. Doctor's or dentist's office are included here if they do not use any type of diagnostic medical equipment (if they do, they are categorized as an outpatient health care building).
Public Assembly	Buildings in which people gather for social or recreational activities, whether in private or non-private meeting halls.
Public Order and Safety	Buildings used for the preservation of law and order or public safety.
Religious Worship	Buildings in which people gather for religious activities, (such as chapels, churches, mosques, synagogues, and temples).
Service	Buildings in which some type of service is provided, other than food service or retail sales of goods
Warehouse and Storage	Buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings (such as self-storage).
Other	Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial/ manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category.
Vacant	Buildings in which more floorspace was vacant than was used for any single commercial activity at the time of interview. Therefore, a vacant building may have some occupied floorspace.

Sources: .....

Residential 2001 Residential Energy Consumption Survey
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

Commercial Commercial Buildings Energy Consumption Survey (CBECS),
Description of CBECS Building Types
http://www.eia.doe.gov/emeu/cbecs/pba99/bldgtypes.html

Embodied Emissions Worksheet

Section I: Buildings

Type (Residential) or Principal Activity (Commercial)	# thousand sq feet/ unit or building	Life span related embodied GHG missions (MTCO2e/ unit)	Life span related embodied GHG missions (MTCO2e/ thousand square feet) - See calculations in table below
Single-Family Home	2.55	98	39
Multi-Family Unit In Large Building	0.85	33	39
Multi-Family Unit in Small Building	1.38	54	39
Mobile Home	1.06	41	39
Education	25.4	991	39
Food Sales	5.6	217	39
Food Service	5.6	217	39
Health Care Inpatient	241.4	9,346	39
Health Care Outpatient	10.4	403	39
Lodging	35.8	1,386	39
Retail (Other Than Mall)	9.7	376	39
Office	14.8	573	39
Public Assembly	14.2	550	39
Public Order and Safety	15.5	600	39
Religious Worship	10.1	391	39
Service	6.5	252	39
Warehouse and Storage	16.9	654	39
Other	21.9	848	39
Vacant	14	546	39

Section II: Pavement

All Types of Pavement			

	Columns and Beams	Intermediate Floors	Exterior Walls	Windows	Interior Walls	Roofs		
Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building	5.3	7.8	19.1	51.2	5.7	21.3		
Average Materials in a 2,272-square foot single family home	0.0	2269.0	3206.0		6050.0	3103.0	Total Embodied Emissions (MTCO2e)	Total Embodied Emissions (MTCO2e/ thousand sq feet)
MTCO2e	0.0	8.0	27.6	6.6	15.6	30.0	88.0	38.7

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Residential floorspace per unit — 2001 Residential Energy Consumption Survey (National Average: 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft_measure.html

Floorspace per building — EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C2. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set4/2003html/c2.html

Average GWP (lbs CO2e/sq ft): Vancouver, Low Rise Building

Athens EcoCalculator
Athena Assembly Evaluation Tool v2.3- Vancouver Low Rise Building
Assembly Average GWP (kg) per square meter
http://www.athenasmi.ca/tools/ecoCalculator/index.html
Lbs per kg 2.20
Square feet per square meter 10.76

Average Materials in a 2,272-square foot single family home

Buildings Energy Data Book: 7.3 TypicalAverage Household
Materials Used in the Construction of a 2,272-Square-Foot Single-Family Home, 2000
http://buildingsdatabook.eren.doe.gov/?id=view_book_table&TableID=2036&f=xls
See also: NAHB. 2004 Housing Facts, Figures and Trends, Feb. 2004, p. 7

Embodied GHG Emissions.....Worksheet Background Information

Buildings
Embodied GHG emissions are emissions that are created through the extraction, processing, transportation, construction and disposal of building materials as well as emissions created through landscape disturbance (by both soil disturbance and changes in above ground biomass).

Estimating embodied GHG emissions is new field of analysis; the estimates are rapidly improving and becoming more inclusive of all elements of construction and development.

The estimate included in this worksheet is calculated using average values for the main construction materials that are used to create a typical family home. In 2004, the National Association of Home Builders calculated the average materials that are used in a typical 2,272 square foot single-family household. The quantity of materials used is then multiplied by the average GHG emissions associated with the life-cycle GHG emissions for each material.

This estimate is a rough and conservative estimate; the actual embodied emissions for a project are likely to be higher. For example, at this stage, due to a lack of comprehensive data, the estimate does not include important factors such as landscape disturbance or the emissions associated with the interior components of a building (such as furniture).

King County realizes that the calculations for embodied emissions in this worksheet are rough. For example, the emissions associated with building 1,000 square feet of a residential building will not be the same as 1,000 square feet of a commercial building. However, discussions with the construction community indicate that while there are significant differences between the different types of structures, this method of estimation is reasonable; it will be improved as more data become available.

Additionally, if more specific information about the project is known, King County recommends two online embodied emissions calculators that can be used to obtain a more tailored estimate for embodied emissions: www.buildcarbonneutral.org and www.athenasmi.ca/tools/ecoCalculator/.

Pavement
Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle. For specifics, see the worksheet.

Special Section: Estimating the Embodied Emissions for Pavement

Four recent life cycle assessments of the environmental impacts of roads form the basis for the per unit embodied emissions of pavement. Each study is constructed in slightly different ways; however, the aggregate results of the reports represent a reasonable estimate of the GHG emissions that are created from the manufacture of paving materials, construction related emissions, and maintenance of the pavement over its expected life cycle.

The results of the studies are presented in different units and measures; considerable effort was undertaken to be able to compare the results of the studies in a reasonable way. For more details about the below methodology, contact matt.kuharic@kingcounty.gov.

The four studies, Meil (2001), Park (2003), Stripple (2001) and Treolar (2001) produced total GHG emissions of 4-34 MTCO2e per thousand square feet of finished paving (for similar asphalt and concrete based pavements). This estimate does not including downstream maintenance and repair of the highway. The average (for all concrete and asphalt pavements in the studies, assuming each study gets one data point) is ~17 MTCO2e/thousand square feet.

Three of the studies attempted to thoroughly account for the emissions associated with long term maintenance (40 years) of the roads. Stripple (2001), Park et al. (2003) and Treolar (2001) report 17, 81, and 68 MTCO2e/thousand square feet, respectively, after accounting for maintenance of the roads.

Based on the above discussion, King County makes the conservative estimate that 50 MTCO2e/thousand square feet of pavement (over the development's life cycle) will be used as the embodied emission factor for pavement until better estimates can be obtained. This is roughly equivalent to 3,500 MTCO2e per lane mile of road (assuming the lane is 13 feet wide).

It is important to note that these studies estimate the embodied emissions for roads. Paving that does not need to stand up to the rigors of heavy use (such as parking lots or driveways) would likely use less materials and hence have lower embodied emissions.

Sources:

Meil, J. A Life Cycle Perspective on Concrete and Asphalt Roadways: Embodied Primary Energy and Global Warming Potential. 2006. Available: http://www.cement.ca/cement.nsf/eee9ec7bbd630126852566c40052107b/6ec79dc8ae03a78285257 2b90061b914/$FILE/ATTK0WE3/athena%20report%20Feb.%202%202007.pdf

Park, K, Hwang, Y., Seo, S., M.ASCE, and Seo, H. , "Quantitative Assessment of Environmental Impacts on Life Cycle of Highways," Journal of Construction Engineering and Management , Vol 129, January/February 2003, pp 25-31, (DOI: 10.1061/(ASCE)0733-9364(2003)129:1(25)).

Stripple, H. Life Cycle Assessment of Road. A Pilot Study for Inventory Analysis. Second Revised Edition. IVL Swedish Environmental Research Institute Ltd. 2001. Available: http://www.ivl.se/rapporter/pdf/B1210E.pdf

Treloar, G., Love, P.E.D., and Crawford, R.H. Hybrid Life-Cycle Inventory for Road Construction and Use. Journal of Construction Engineering and Management. P. 43-49. January/February 2004.

Energy Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	Energy consumption per building per year (million Btu)	Carbon Coefficient for Buildings	MTCO2e per building per year	Floorspace per Building (thousand square feet)	MTCE per thousand square feet per year	MTCO2e per thousand square feet per year	Average Building Life Span	Lifespan Energy Related MTCO2e emissions per unit	Lifespan Energy Related MTCO2e emissions per thousand square feet
Single-Family Home	107.3	[illegible]	11.61	2.53	4.6	16.8	57.9	672	266
Multi-Family Unit in Large Building	41.0	[illegible]	4.44	0.85	5.2	19.2	80.5	357	422
Multi-Family Unit in Small Building	78.1	[illegible]	8.45	1.39	6.1	22.2	80.5	681	489
Mobile Home	75.9	[illegible]	8.21	1.06	7.7	28.4	57.9	475	448
Education	2,125.0	[illegible]	264.2	25.6	10.3	37.8	62.5	16,526	646
Food Sales	1,110.0	[illegible]	138.0	5.6	24.6	90.4	62.5	8,632	1,541
Food Service	1,436.0	[illegible]	178.5	5.6	31.9	116.9	62.5	11,168	1,994
Health Care Inpatient	60,152.0	[illegible]	7,479.1	241.4	31.0	113.6	62.5	467,794	1,938
Health Care Outpatient	985.0	[illegible]	122.5	10.4	11.8	43.2	62.5	7,660	737
Lodging	3,578.0	[illegible]	444.9	35.8	12.4	45.6	62.5	27,826	777
Retail (Other Than Mall)	720.6	[illegible]	89.5	9.7	9.2	33.8	62.5	5,599	577
Office	1,376.0	[illegible]	171.1	14.8	11.6	42.4	62.5	10,701	723
Public Assembly	1,338.0	[illegible]	166.4	14.2	11.7	43.0	62.5	10,405	733
Public Order and Safety	1,791.0	[illegible]	222.7	15.3	14.4	52.7	62.5	13,928	899
Religious Worship	440.0	[illegible]	54.7	10.1	5.4	19.9	62.5	3,422	339
Service	501.0	[illegible]	62.3	6.5	9.6	35.1	62.5	3,896	599
Warehouse and Storage	764.0	[illegible]	95.0	16.9	5.6	20.6	62.5	5,942	352
Other	3,600.6	[illegible]	447.6	21.9	20.4	74.9	62.5	27,997	1,278
Vacant	294.0	[illegible]	36.6	14.1	2.6	9.5	62.5	2,286	162

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

Energy consumption for residential buildings

2007 Buildings Energy Data Book: 6.1 Quad Definitions and Comparisons (National Average, 2001)
Table 6.1.4: Average Annual Carbon Dioxide Emissions for Various Functions
http://buildingsdatabook.eren.doe.gov/
Data also at: http://www.eia.doe.gov/emeu/recs/recs2001_ce/ce1-4c_housingunits2001.html

Energy consumption for commercial buildings
and
Floorspace per building

EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3 Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003excelc3.xls

Note: Data in plum color is found in both of the above sources (buildings energy data book and commercial buildings energy consumption survey).

[illegible]

Residential floorspace per unit

2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

average lief span of buildings,
estimated by replacement time method

	Single Family Homes	Multi-Family Units in Large and Small Buildings	All Residential Buildings	
New Housing Construction, 2001				
Existing Housing Stock, 2001	73,706,000	26,500,000	100,206,000	
Replacement time:	57.9	80.5	62.5	(national average, 2001)

Note: Single family homes calculation is used for mobile homes as a best estimate life span.
Note: At this time, KC staff could find no reliable data for the average life span of commercial buildings.
Therefore, the average life span of residential buildings is being used until a better approximation can be ascertained.

Sources:

Existing
Housing Stock,
2001 Residential Energy Consumption Survey (RECS) 2001
Tables HC1:Housing Unit Characteristics, Million U.S. Households 2001
Table HC1-4a. Housing Unit Characteristics by Type of Housing Unit, Million U.S. Households, 2001
Million U.S. Households, 2001
http://www.eia.doe.gov/emeu/recs/recs2001/hc_pdf/housunits/hc1-4a_housingunits2001.pdf

Transportation Emissions Worksheet

Type (Residential) or Principal Activity (Commercial)	# people/ unit or building	# thousand sq feet/ unit or building	# people or employees/ thousand square feet	vehicle related GHG emissions (metric tonnes CO2e per person per year)	MTCO2e/ year/ unit	MTCO2e/ year/ thousand square feet	Average Building Life Span	Life span transportation related GHG emissions (MTCO2e/ per unit)	Life span transportation related GHG emissions (MTCO2e/ thousand sq feet)
Single-Family Home	2.6	2.53	1.1	4.9	13.7	5.4	57.9	792	313
Multi-Family Unit in Large Building	1.9	0.85	2.3	4.9	9.5	11.2	80.5	766	904
Multi-Family Unit in Small Building	1.9	1.39	1.4	4.9	9.5	6.8	80.5	766	550
Mobile Home	2.5	1.06	2.3	4.9	12.2	11.5	57.9	709	668
Education	30.0	25.6	1.2	4.9	147.8	5.8	62.5	9247	361
Food Sales	5.1	5.6	0.9	4.9	25.2	4.5	62.5	1579	282
Food Service	10.2	5.6	1.8	4.9	50.2	9.0	62.5	3141	561
Health Care Inpatient	455.5	241.4	1.9	4.9	2246.4	9.3	62.5	140506	582
Health Care Outpatient	19.3	10.4	1.9	4.9	95.0	9.1	62.5	5941	571
Lodging	13.6	35.8	0.4	4.9	67.1	1.9	62.5	4194	117
Retail (Other Than Mall)	7.8	9.7	0.8	4.9	38.3	3.9	62.5	2394	247
Office	28.2	14.8	1.9	4.9	139.0	9.4	62.5	8696	588
Public Assembly	6.9	14.2	0.5	4.9	34.2	2.4	62.5	2137	150
Public Order and Safety	18.8	15.6	1.2	4.9	92.7	6.0	62.5	5796	374
Religious Worship	4.2	10.1	0.4	4.9	20.8	2.1	62.5	1298	129
Service	5.6	6.5	0.9	4.9	27.6	4.3	62.5	1729	266
Warehouse and Storage	9.9	18.9	0.5	4.9	49.0	2.9	62.5	3067	181
Other	18.3	21.9	0.8	4.9	90.0	4.1	62.5	5630	257
Vacant	2.1	14.1	0.1	4.9	10.5	0.7	62.5	657	47

Sources

All data in black text — King County, DNRP. Contact: Matt Kuharic, matt.kuharic@kingcounty.gov

people/ unit — Estimating Household Size for Use in Population Estimates (WA state, 2000 average)
Washington State Office of Financial Management
Kimpel, T. and Lowe, T. Research Brief No. 47. August 2007
http://www.ofm.wa.gov/researchbriefs/brief047.pdf
Note: This analysis combines Multi Unit Structures in both large and small units into one category; the average is used in this case although there is likely a difference

Residential floorspace per unit — 2001 Residential Energy Consumption Survey (National Average, 2001)
Square footage measurements and comparisons
http://www.eia.doe.gov/emeu/recs/sqft-measure.html

vehicle related GHG emissions

Estimate calculated as follows (Washington state, 2005)_

56,531,930,000 2006 Annual WA State Vehicle Miles Traveled
Data was daily VMT. Annual VMT was 365*daily VMT
http://www.wsdot.wa.gov/mapsdata/tdo/annualmileage.htm

6,395,798 2006 WA state population
http://quickfacts.census.gov/qfd/states/53000.html

8836 vehicle miles per person per year

0.0506 gallon gasoline/mile
This is the weighted national average fuel efficiency for all cars and 2 axle, 4 wheel light trucks in 2005. This includes pickup trucks, vans and SUVs. The 0.051 gallons/mile used here is the inverse of the more commonly known term "miles/per gallon" (which is 19.75 for these cars and light trucks)
Transportation Energy Data Book, 26th Edition, 2006. Chapter 4: Light Vehicles and Characteristics. Calculations based on weighted average MPG efficiency of cars and light trucks.
http://cta.ornl.gov/data/tedb26/Edition26_Chapter04.pdf
Note: This report states that in 2005, 92.3% of all highway VMT were driven by the above described vehicles.
http://cta.ornl.gov/data/tedb26/Spreadsheets/Table3_04.xls

24.3 lbs CO2e/gallon gasoline
The CO2 emissions estimates for gasoline and diesel include the extraction, transport, and refinement of petroleum as well as their combustion.
Life-Cycle CO2 Emissions for Various New Vehicles. RENew Northfield.
Available: http://renewnorthfield.org/wp-content/uploads/2006/04/CO2%20emissions.pdf
Note: This is a conservative estimate of emissions by fuel consumption because diesel fuel, with a emissions factor of 26.55 lbs CO2e/gallon was not estimated.

2205

4.93 lbs/metric tonne
vehicle related GHG emissions (metric tonnes CO2e per person per year)

average lief span of buildings, estimated by replacement time method — See Energy Emissions Worksheet for Calculations

Commercial floorspace per unit — EIA, 2003 Commercial Buildings Energy Consumption Survey (National Average, 2003)
Table C3. Consumption and Gross Energy Intensity for Sum of Major Fuels for Non-Mall Buildings, 2003
http://www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/2003set9/2003e/ce9c3.xls

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12/02/2014	CADS14-0327	Critical Areas Designation - Formal Designation	SiteDevCA		ESTATE OF BARBARA NELSON CRITICAL AREA DESIGNATION	196TH AVE NE, 98053	Reviews In Process
12/02/2014	GRDE14-0143	Grading	SiteDevCA	LOT 1 KC BLA #BLAD13-0001	GUNSHY MANOR ABC CLEARING/GRADING	20005 NE UNION HILL RD, 98053	Intake Completed
09/03/2014	PREA14-0205	Pre-App Mandatory-ABC	Planning		NELSON ABC	20005 NE UNION HILL RD, 98053	Pre-Application Comple
07/24/2014	PREA14-0179	Pre-App Mandatory-Standard	Planning		Gunshy Manor	WA	Application Accepted
07/24/2014	PLAT14-0008	Plat	Planning		Gunshy Manor Preliminary Plat	7240 196TH AVE NE, 98053	Void
06/19/2014	ENFR14-0512	Code Enforcement Case	Enforce		nelson	20005 NE UNION HILL RD, 98053	Permit Process Started
10/01/1990	E90C1074	Enforce/Enforcement/NA/NA	Enforce		MOBILE HOME PLACED W/O PERMITS	7412 196TH AVE NE, King County, WA	Closed